

AMENDMENTS TO THE CLAIMS

The following listing of the claims replaces all prior versions and listings of claims in this application.

Listing of the Claims

1. (Withdrawn) A system for transducing and stimulating perineal musculature and/or nerves, in humans, comprising:

a single, separate unit in the form of a portable, substantially cylindrical, combination probe, which integrates a transceiver, antenna, programmable microprocessor, and power source; has a substantially smooth and substantially sealed outer surface; is adapted to ergonomically insert into, be removed from, and be entirely contained within a human's own vagina; and is provided with means for sensing and transducing a vaginal condition and substantially annular means for stimulating perineal musculature and/or nerves, wherein said substantially annular means is substantially flush with the outer surface of the probe;

wherein said combination probe is provided with 2-way communication means for transmitting information that is transduced and for receiving control and programming signals wirelessly and in real time; and

a single, separate unit in the form of a combination controller and transceiver that is provided with means for sending signals to said probe and for receiving signals therefrom wirelessly and in real time; said signals to said probe

comprising instructions control and programming signals to start, stop, and/or alter the level of stimulation;

wherein a wireless signal feedback loop is provided within said probe and between said controller and said probe in real time during operation of the system and which may be an interactive or closed signal feedback wireless loop.

2. (Canceled)

3. (Canceled)

4. (Canceled)

5. (Canceled)

6. (Canceled)

7. (Canceled)

8. (Canceled)

9. (Canceled)

10. (Canceled)

11. (Canceled)

12. (Withdrawn) A system according to claim 1, wherein said controller and/or said probe are/is provided with means to transmit signals to and/or receive signals from an external device, network, and/or database wirelessly and in real time.

13. (Withdrawn) A system according to claim 1, where said combination controller and transceiver is a hand-held unit.

14. (Canceled)

15. (Canceled)

16. (Canceled)

17. (Canceled)

18. (Canceled)

19. (Canceled)

20. (Withdrawn) A system according to claim 1, wherein said probe is adapted to be programmed to start and/or stop sensing and/or stimulating after a predetermined period of time.

21. (Withdrawn) A system according to claim 1, wherein said probe is adapted to be programmed to change its stimulating activity in response to sensed perineal muscle activity.

22. (Withdrawn) A system according to claim 1, wherein said probe is adapted to be programmed to automatically change its stimulating activity over time.

23. (Withdrawn) A system according to claim 22, wherein said probe is adapted to be programmed to stimulate perineal musculature and/or nerves in cycles of alternating stimulation and rest periods.

24. (Withdrawn) A system according to claim 1, wherein said probe and/or said controller are/is provided with memory.

25. (Withdrawn) A system according to claim 1, wherein said probe is adapted to deliver medication.

26. (Withdrawn) A system according to claim 1, wherein an end of said probe is rounded.

27. (Withdrawn) A system according to claim 1, wherein said probe is less than one inch in diameter and less than four inches long.

28. (Withdrawn) A system according to claim 1, wherein said probe is provided with means for facilitating removal from a vagina.

29. (Withdrawn) A system according to claim 1, further comprising a tester for the combination probe unit.

30. (Withdrawn) A package comprising a system according to claim 29 and a holder adapted to hold said combination probe unit, said combination controller unit, and said tester.

31. (Withdrawn) A system according to claim 1, wherein said system is adapted to permit a human user to operate the combination controller and transceiver while the said probe is in the human user's vagina.

32. (Currently Amended) A system for stimulating pelvic muscles and/or nerves in a mammal, comprising:

a portable probe unit, said probe unit comprising a substantially cylindrical body having a substantially smooth and substantially sealed outer surface with a rounded end and so dimensioned as to permit comfortable and repeated insertion into, removal from, and containment entirely within a mammal's vagina; substantially annular means substantially flush with the outer surface of the body of the probe unit and adapted to deliver electrical pulses; a programmable microprocessor; memory; a battery; and two-way communication means with antenna and adapted to both transmit signals to a controller unit and receive signals from said controller unit wirelessly and in real time; and

a controller unit comprising two-way communication means adapted to both receive signals from said probe unit and transmit signals to said probe unit wirelessly and in real time, wherein said signals to said probe unit comprise ~~instructions~~ control and programming signals to start, stop, and/or alter the activity of the annular means of the probe unit.

33. (Previously presented) A system according to claim 32, said probe unit and/or said controller unit further comprising means for transmitting signals to and/or receiving signals from an external device, network, and/or database, wirelessly and in real time.

34. (Previously presented) A system according to claim 32, wherein said controller unit is provided with memory.

35. (Previously presented) A system according to claim 32, wherein said probe unit is adapted to be programmed to start and/or stop delivery of electrical pulses after a predetermined period of time.

36. (Previously presented) A system according to claim 32, wherein said probe unit is adapted to be programmed to deliver cycles of alternating electrical pulses and rest periods.

37. (Previously presented) A system according to claim 32, wherein said probe unit is adapted to be programmed to deliver electrical pulses of varying strengths.

38. (Withdrawn) A system according to claim 32, said probe unit further comprising means for sensing a vaginal condition.

39. (Withdrawn) A system according to claim 38, wherein said probe unit is adapted to be programmed to adjust its delivery of electrical pulses in response to a sensed vaginal condition.

40. (Withdrawn) A system according to claim 32, wherein said probe unit is adapted to deliver medication.

41. (Previously presented) A system according to claim 32, said probe unit further comprising means for facilitating removal of the probe from a mammal's vagina.

42. (Previously presented) A system according to claim 32, wherein said probe unit is less than one inch in diameter and less than four inches in length.

43. (Previously presented) A system according to claim 32, wherein said probe unit and said controller unit are adapted to be held together, and wherein separation of said probe unit and said controller unit causes said probe unit to turn on.

44. (Withdrawn) A system according to claim 32, further comprising a tester for said probe unit.

45. (Withdrawn) A system according to claim 44, further comprising a holder adapted to hold said probe unit, said controller unit, and said tester.

46. (Previously presented) A system according to claim 32, wherein said controller unit is adapted to be hand-held.

47. (Previously presented) A system according to claim 32, wherein said controller unit is adapted to permit manual operation and control of said probe unit.

Claims 48 - 72 (Cancelled)

73. (New) A system according to claim 32, wherein said two-way communication means of said controller unit adapted to both receive signals from said probe unit and transmit signals to said probe unit includes means for wirelessly altering operation settings of said probe in real time.

74. (New) A system according to claim 73, wherein said means of said controller unit for wirelessly altering integrates a battery, transceiver, antenna, memory and a microprocessor.

75. (New) A system according to claim 32, wherein said probe unit contains no surface controls.

76. (New) A system according to claim 32, wherein said microprocessor, said memory, said battery, and said two-way communication means with antenna are integrated in said probe unit.

77. (New) A system according to claim 32, wherein said controller unit also includes, integrated with said two-way communication means, a programmable microprocessor, battery and antenna, wherein an interactive or closed wireless signal feedback loop is provided within said probe unit and between said controller unit and said probe unit in real time during operation of said system.

78. (New) A system according to claim 32, wherein said microprocessor of said probe unit is a programmable microprocessor.

79. (New) A system according to claim 32, wherein said two-way communication means of said probe unit and said controller unit are in the form of transceivers.

80. (New) A method for stimulating pelvic muscles and/or nerves in a mammal, including the steps of:

activating a portable probe unit comprising a two-way transceiver with antenna, a programmable microprocessor, and a power source;

inserting the probe unit substantially entirely into the vagina of a mammal, wherein said probe unit is adapted to stimulate pelvic muscles and/or nerves;

providing control and programming signals to the probe unit from a separate controller unit disposed outside the vagina, wherein the controller unit comprises two-way communication means adapted to both receive signals from the probe unit and transmit signals to the probe unit wirelessly and in real time, *wherein an interactive or closed wireless signal feedback loop is provided within said probe unit and between said controller unit and said probe unit in real time during operation.*

81. (New) A method according to claim 80, wherein the probe unit is adapted to automatically cease or change its stimulating activity after a predetermined period of time.

82. (New) A method according to claim 80, wherein the probe unit is adapted to stimulate pelvic muscles and/or nerves in cycles of alternating stimulation and rest periods.

83. (New) A method according to claim 80, wherein the probe unit is adapted to deliver electrical pulses of varying strengths.

84. (New) A method according to claim 80, wherein the controller unit is adapted to wirelessly transmit a signal to the probe unit to initiate the step of activating the probe unit.

85. (New) A method according to claim 80, wherein the control unit is adapted to wirelessly transmit a signal to the probe unit to increase, decrease, stop, and/or start stimulating activity of the probe unit in real time.

86. (New) A method according to claim 80, wherein at least one of the probe unit and the controller unit is adapted to transmit a signal to and/or receive a signal from an external device, network, or database, wirelessly and in real time.

87. (New) A method according to claim 80, wherein the controller unit is adapted to provide signals to the probe unit even after said step of inserting the probe unit substantially entirely into the vagina of a mammal.